HEALTH ALERT

Congenital Syphilis Cases Continue to Rise

July 15, 2021

Summary and Action Items

- Ohio is experiencing an upward trend in reported congenital syphilis (CS) cases since 2016.
- CS should now be a concern for healthcare providers across the state. Although CS cases have been reported predominantly from urban areas in the past, 45% of CS cases in Ohio in 2020 were reported from non-urban areas.
- CS occurs when the sexually transmitted pathogen *Treponema pallidum* is transmitted to a fetus during pregnancy. Without adequate treatment, CS can cause miscarriage, stillbirth, prematurity, low birth weight, death shortly after birth, bone deformities, severe anemia, enlarged liver and spleen, jaundice, brain and nerve damage, meningitis, and skin rashes.
- CS can be prevented with adequate maternal treatment 30 days prior to delivery. Adequate treatment of early syphilis in pregnant persons is 2.4mu penicillin G benzathine. Adequate treatment of late or unknown duration syphilis in pregnant persons is 3 doses of 2.4mu penicillin G benzathine 7 days apart +/- 1 day. Penicillin G is the only therapy with documented efficacy for syphilis during pregnancy. Pregnant people with syphilis in any stage who report penicillin allergy should be desensitized and treated with penicillin.
- Incorporation of third trimester syphilis screening for pregnant persons allows healthcare providers to identify and treat syphilis prior to delivery, thereby averting cases of CS. Testing for syphilis at or near 28 weeks gestation is recommended to afford healthcare providers or public health officials adequate time to initiate treatment prior to delivery.
- Management of syphilis and congenital syphilis cases should be guided by the Centers for Disease Control and Prevention (CDC) STD Treatment Guidelines.
- Report all laboratory confirmed and clinically suspected cases of syphilis, including congenital syphilis, to the Ohio Department of Health (ODH) by the close of the next business day using the attached Ohio Confidential Reportable Disease Form. Please fax completed forms to ODH via secure fax at 614-387-2602, ***Attention: STD Surveillance Program***.

Background

In Ohio, cases of CS have **increased 146%** over the last 5 years, from 13 cases in 2016 to 32 cases in 2020, including two syphilitic stillbirths. While CS cases represent less than 2% of total syphilis cases reported in Ohio, rising incidence is especially concerning for this preventable but potentially life-threatening condition. At both the state and national levels, the increase in CS cases parallels the increase in cases of infectious syphilis among women of reproductive age. If this upward trend continues through the remainder 2021, Ohio is expected surpass the total number of CS cases reported in 2020.

CS occurs when the sexually transmitted pathogen *Treponema pallidum* is transmitted to a fetus in pregnancy. CS can cause skin rashes, low birth weight, prematurity, bone deformities, severe anemia, enlarged liver and spleen, jaundice, brain and nerve damage, meningitis, miscarriage, stillbirth, and death shortly after birth. The risk for antepartum fetal infection is related to the stage of syphilis during pregnancy. Primary and secondary syphilis have the highest risk of fetal infection, though risk is still significant in pregnant women with late syphilis.

A common missed prevention opportunity for CS nationally and in Ohio is a lack of timely and adequate maternal treatment. Adequate maternal treatment requires 1) that treatment be initiated at least 30 days prior to delivery and 2) that treatment be appropriate for the mother's stage of syphilis, with adherence to stricter CDC-recommended guidelines for treatment of syphilis in pregnancy. *Rapid initiation of treatment for syphilis in all pregnant persons and completion of that treatment in accordance with the diagnosed stage of syphilis is paramount for the reduction of CS cases.*

Another common missed opportunity for CS prevention in Ohio is late identification of syphilis infection during pregnancy for those in prenatal care. These cases may not complete testing early in pregnancy or may have non-reactive nontreponemal tests early in pregnancy and are subsequently diagnosed with syphilis at or immediately before delivery. *Implementation of the third trimester screenings will allow sufficient time for pregnant persons to begin a treatment regimen prior to delivery, leading to a reduction in CS cases.*

Recommendations

ODH is asking healthcare providers to implement third trimester screening for syphilis as a new standard of practice. Ohio law mandates syphilis screening at the first prenatal visit, though a single screening may not be sufficient for those at increased risk based on self-reported sexual behavior. It is recommended that pregnant persons be screened again at 28 weeks gestation, and a final time at delivery. Every pregnant person who presents with symptoms of an STI should be tested for syphilis as well. **No infant should leave the hospital without the mother's serological status having been documented.**

- Syphilis testing should be performed in accordance CDC Diagnostic Considerations, with darkfield examinations of lesion tissue being the definitive method of diagnosing early syphilis, and a presumptive diagnosis requiring the use of both a nontreponemal and a treponemal test in addition to the patient's syphilis diagnosis and treatment history.
- Seropositive pregnant persons should be considered infected unless an adequate treatment history is documented clearly in the medical records and sequential serologic antibody titers have declined appropriately for the stage of syphilis.
- Treatment of syphilis in pregnant persons should be initiated as quickly as possible, and should be appropriate for stage of syphilis in accordance with CDC Treatment Guidelines. Penicillin G benzathine is the only therapy with documented efficacy for syphilis during pregnancy. Pregnant persons with syphilis in any stage who report penicillin allergy should be desensitized and treated with penicillin.
- Treatment of late or unknown duration syphilis must follow exact spacing of 7 days apart +/- 1 day to be considered adequate for pregnant persons. Missed, early, or late doses are not acceptable, and infants born to mothers not adequately treated are automatically considered a CS case according to the case definition.

Reporting Syphilis and CS Cases to ODH

- Healthcare providers should report all laboratory confirmed and clinically suspected cases of syphilis, including congenital syphilis, to ODH by the close of the next business day using the attached Ohio Confidential Reportable Disease Form. Please fax completed forms to ODH via secure fax at 614-387-2602, ***Attention: STD Surveillance Program***.
- Healthcare providers and laboratories should report all syphilis infections and other notifiable STDs in accordance with Ohio's infectious disease reporting requirements found here.

ODH and Local Public Health Response

- The ODH STD Surveillance Program will continue to conduct statewide surveillance activities for congenital syphilis cases.
- Local public health Disease Intervention Specialists (DIS) will perform a behavioral risk assessment with reported syphilis and congenital syphilis cases to obtain a sexual history, including information on transactional sex, history of drug use, including injection drug use, and provide STD/HIV prevention counseling to clients.
- ODH and local public health officials are working together to begin convening Congenital Syphilis Review Boards which will review all Ohio CS cases for identification of further opportunities for prevention of CS.

Contact Information

- For questions on the reporting of congenital syphilis cases please contact Mary McNeill, Epidemiologist III with the ODH STD Surveillance Program, at (614) 466-5069 or Charlotte Sinkula, Epidemiologist II with the ODH STD Surveillance Program at (614) 644-7562.
- For questions on CS treatment please call Kate Klink, Infectious Disease Control Consultant with ODH STI Prevention Program, at (614) 704-8110.
- For any other questions regarding CS, please contact Mark Pawelczak at STI_Prev@odh.ohio.gov or at (419) 490-4464.

Attachments

- Ohio Confidential Reportable Disease Form HEA 3334
- CDC Congenital Syphilis Case Investigation and Report Form OMB No. 0920-0128

Resources

- STD Case Reporting in Ohio: odh.ohio.gov/wps/portal/gov/odh/know-our-programs/std-surveillance/Reporting/
- Syphilis Chapter of the Ohio Infectious Disease Control Manual: odh.ohio.gov/wps/portal/gov/odh/know-our-programs/std-surveillance/resources/syphilis-idcm
- Syphilis during Pregnancy CDC: cdc.gov/std/tg2015/syphilis-pregnancy.htm
- The Diagnosis, Management and Prevention of Syphilis: nycptc.org/x/Syphilis_Monograph_2019_NYC_PTC_NYC_DOHMH.pdf
- Guidance for obtaining a sexual history is available on the CDC Division of STD Prevention resource page: cdc.gov/std/treatment/resources.htm
- National Network of STD Clinical Prevention Training Centers STD Clinical Consultation Network: stdccn.org/
- STD Prevention Resources: cdc.gov/std/publications/STDPreventionResources_WEB.pdf

Recipients:

- ODH Senior Leadership
- Statewide Epi-Surveillance
- Statewide HAN Notification
- Statewide Hospital IP
- Statewide LHD Leadership
- Statewide Nursing-Physician-Medical
- Statewide OPHCS Coordinator